



# **Workforce Planning**

## **Presented to New Supervisor Orientation**

David Jeffreys  
Manager, Workforce Strategy and Planning Office

November 28, 2007



# Definition

---

- What is workforce planning? In its simplest form, workforce planning is a set of analyses and business processes designed to help answer the following questions:
  - Does the organization have the right number of personnel and the right type of workforce to perform the organization's work **now**?
  - Does the organization have the number of personnel and the right type of workforce to perform the organization's work **in the future**?
  - If not, **what is the extent of the problem** and **what should we do about it**?
- A common description of workforce planning is—
  - *Workforce planning ensures that “the right people with the right skills are in the right place at the right time.” It includes a methodical process that helps an organization identify workforce gaps [or surpluses] and develop human capital strategies to meet organizational goals.*



# Components of Workforce Planning

---

## Workforce Demand

- Requirements of workforce to perform work: Measurement of how many staff of what type/competency are needed to perform each type of work, now and in the future.
- Understanding of current and future work demand with particular attention on size, complexity, and unique requirements of the work needed to determine demand.
- Understanding current and future demand helps account for predictability, volatility, degree of strategic importance, visibility, and risk of the work.
- Drives translation of workforce demand or changes into specific workforce requirements relative to the organization's work structure.
- Demand assessment may include environmental scan that accounts for changes in industry practices or risk factors that may affect the demand for different types in the future.
- Data supporting an assessment of workforce demand typically include:
  - Multiyear projections of program civil service full-time equivalents (FTE) and competency requirements
  - Longer term projections (often greater than 3 years) of workforce requirements
  - Cost and projections for available funding
  - Alignment with other federal initiatives.



# Components of Workforce Planning

---

## Workforce Supply

- Availability of workforce to perform work: The number of employees of different types available now and projected in the future to perform the work.
- Workforce supply characteristics involve assessment of number, types, scalability, deployment flexibility, and adaptability of the current workforce.
  - May include supply modeling and analysis to understand supply sustainability, assessing what the composition of the workforce may be in the future given typical dynamics (e.g., attrition, turnover, and headcount/hiring constraints).
- Data supporting assessment of current workforce supply typically include:
  - Workforce demographic statistics and trends
  - Attrition analysis
  - Competency/Skill-based assessments
  - Workforce ceilings (limits) and other constraints (e.g. term and perm ratio)



# Components of Workforce Planning

---

## Gaps and Surpluses

- Differences (mathematically calculated) between workforce demand and supply
- Gaps indicate there are not enough staff (either overall or specific types) to perform the work.
- Surpluses indicate there are or could be too many staff (either overall or specific types) for the amount of work available
- To calculate gaps and surpluses, the workforce demand and supply must be characterized the same way for “type” and “number.”
  - Type -- Individual positions within the organization, groups of positions (e.g., systems engineers), or competencies (e.g., knowledge, skills, and abilities that make up positions or functions)
  - Number -- Number of staff (“whole people”) equating to the number of FTEs.
- Resulting gaps and surpluses are analyzed
  - Which gaps and surpluses have the most negative impact on the organization?
  - Which gaps and surpluses are easiest for the organization to solve?
  - Which future gaps and surpluses are most likely to occur?
- Strategies developed and prioritized to close gaps and reduce surpluses
  - Hiring plans
  - Training
  - Job experience/rotations
  - Buyouts



# Increased Focus on Workforce Planning at NASA

---

NASA increased its focus on workforce planning across the Agency over the last five years with new planning processes and tools, revised policies, and greater participation in decision-making by Agency representatives.

- Main drivers
  - Movement to Space Exploration with associated risks
  - Ongoing volatility in funding and mission profiles within and among the major mission areas at the Agency (i.e., Science, Aeronautics, and Exploration mission areas) impacting workforce requirements.
  - Implementation of “full cost management” at the Agency
  - Government-wide emphasis on improving government efficiency and effectiveness, and controlling growth of the government workforce.
  - Government-wide emphasis on measuring organizations’ operational effectiveness in all areas, including workforce (e.g., President’s Management Agenda).
  - General concern about “aging” of the government workforce and consequent risk of the Agency losing large numbers of proven talent.
  - Geographic distribution and decentralization of existing workforce planning activities within the Agency.
- NASA is currently engaged in a multiyear effort to strengthen workforce planning in response to these drivers.



# NASA Workforce Planning Principles

---

- Effective workforce planning at NASA requires active participation by Agency, Program, and Center representatives according to the roles most appropriate to their organizational locations and roles.
- Workforce planning is based on strategic and mission planning and informs human capital planning
- Workforce planning must be closely integrated with budget planning to understand how to best use a defined set of workforce resources.
- Workforce planning should cover multiple time frames—short (0–1 years), medium (1–6 years), and long (2+ years)—to provide thorough assessments and to generate complete sets of options for decision-making.
- Workforce planning should consider more than one set of future requirements – scenario planning
- Workforce planning should include within its scope the total workforce—civil servants and contractors



# Workforce Planning Framework

Time Frame	Key Decision-Makers	Purpose	Description
<b>Strategic Workforce Planning</b>			
Long-term (2+ years)	Agency, Program, and Center Senior Leadership	Assess and plan improvements to each Center's longer-term workforce composition and health	<p><b>Process:</b> Annual data calls, special studies as needed for Agency-level decisions</p> <p><b>Output:</b> Annually updated <i>Strategic Workforce Plan</i>,<sup>2</sup> including:</p> <ul style="list-style-type: none"> <li>▶ Changes to Center work roles</li> <li>▶ Sourcing strategies</li> <li>▶ Human capital tools (e.g., ceilings, hiring controls, flexibilities/legislation, buyouts)</li> <li>▶ Workforce investments (e.g., training investments)</li> </ul>
<b>Programmatic Workforce Planning</b>			
Mid-term (2–6 years)	<ul style="list-style-type: none"> <li>▶ Program Management</li> <li>▶ Agency Leaders</li> <li>▶ Center Leaders and Managers</li> </ul>	Align workforce with budget and implement workforce strategies	<p><b>Process:</b> Annual planning, performance, budget, and execution process (PPBE) leading to Agency and Center decisions</p> <p><b>Output:</b> Workforce data for budget; set of management actions to be implemented at Agency and Center levels:</p> <ul style="list-style-type: none"> <li>▶ Changes to individual program or project assignments or sourcing decisions</li> <li>▶ Agency alterations to ceilings or hiring controls for next few years</li> <li>▶ Center hiring and redeployment decisions, or redistribution of ceiling authorities across Directorates</li> </ul>
<b>Operational Workforce Planning</b>			
Near-term (0–1 years)	<ul style="list-style-type: none"> <li>▶ Center Line Management</li> <li>▶ Project Managers</li> <li>▶ Human Capital Representatives</li> </ul>	Develop detailed plans implementing changes identified in the programmatic planning, and managing workforce	<p><b>Process:</b> Set of regular activities, performed weekly or monthly, for Center decision-making and management</p> <p><b>Output:</b> Center workforce plans for the next year, with elements such as:</p> <ul style="list-style-type: none"> <li>▶ Directorate ceilings</li> <li>▶ Hiring plans</li> <li>▶ Phasing plans</li> </ul>

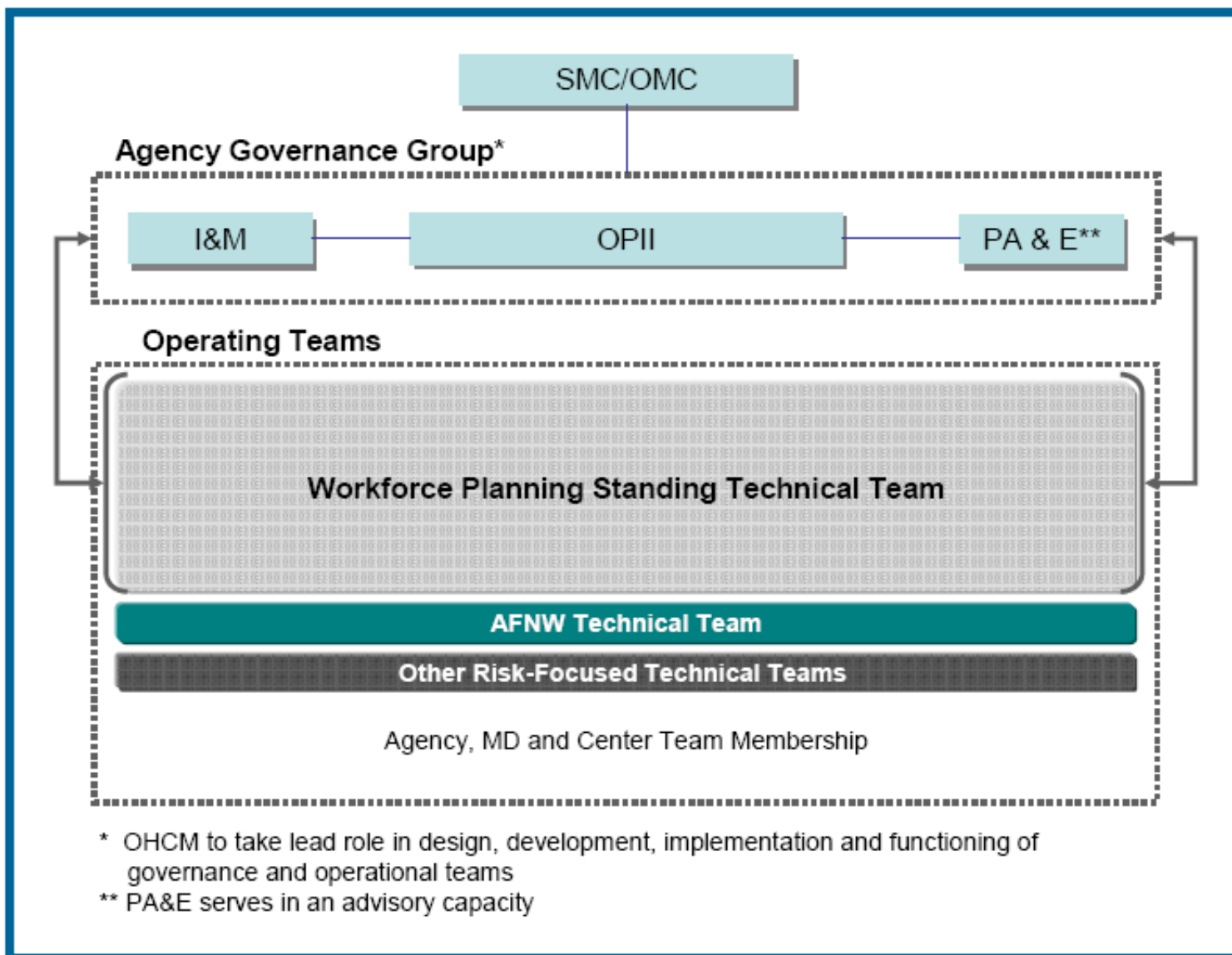


# Roles and Responsibilities

Organization	Workforce Planning Role/Responsibility
Agency	<ul style="list-style-type: none"><li>▶ Provide oversight for the Agency-wide workforce planning process</li><li>▶ Develop or revise Agency workforce policies and guidance</li><li>▶ Make decisions related to Center work roles and internal versus external labor sourcing, balancing Program and Center considerations</li><li>▶ Assess risks to Agency associated with workforce misalignments</li><li>▶ Apply resources to address misalignments</li><li>▶ Approve workforce actions of consequence to Agency (e.g., reduction in force)</li><li>▶ Communicate workforce issues to external stakeholders</li><li>▶ Conceive, analyze, promote, and implement new workforce flexibilities</li></ul>
Mission Directorates/ Programs	<ul style="list-style-type: none"><li>▶ Plan work and funding distribution</li><li>▶ Define work requirements</li><li>▶ Negotiate workforce resources to perform work</li><li>▶ Solve issues around distribution of work and funding with Agency and Centers</li><li>▶ Assess and communicate risks to program performance associated with workforce</li></ul>
Centers	<ul style="list-style-type: none"><li>▶ Identify potential work Center could perform</li><li>▶ Monitor condition of workforce capabilities</li><li>▶ Define workforce requirements to perform assigned work</li><li>▶ Identify existing or potential workforce misalignments and health issues, and communicate them to Programs/Agency</li><li>▶ Provide feedback on policies and practices</li></ul>



# Agency Workforce Governance





# MSFC Governance

- Goals/Objectives
- Investment Priorities
- Organizational Structure, Product Lines and Management Models
- Stakeholder and Customer Relationships

**Strategic  
Planning  
Council (SPC)**

- Mission Enablement
- Management of Center Assets and Human Capital
- Business Process Management Including Metrics and Controls
- Integrated Budget Process
- Core Competencies/Capabilities
- MSFC Implementation Plans

**Integrated  
Management  
Systems Board  
(IMSB)**

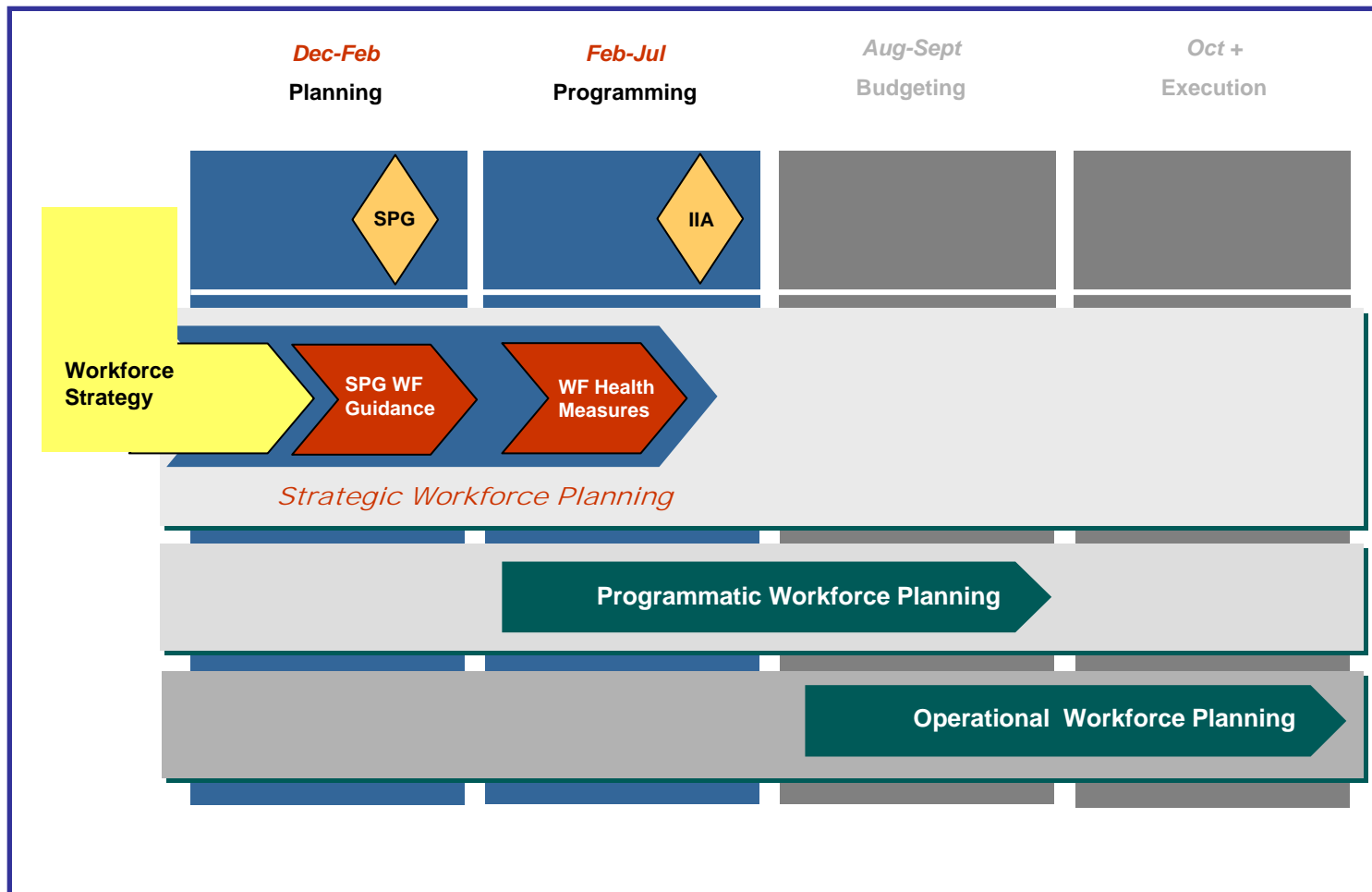
**MSFC  
Governing  
Councils**

- Program/Project Performance/Technical Excellence
- Evaluation Against Baseline
- Reporting
- Integrated, Budget and Asset Coordination
- Safety

**Center  
Management  
Council (CMC)**

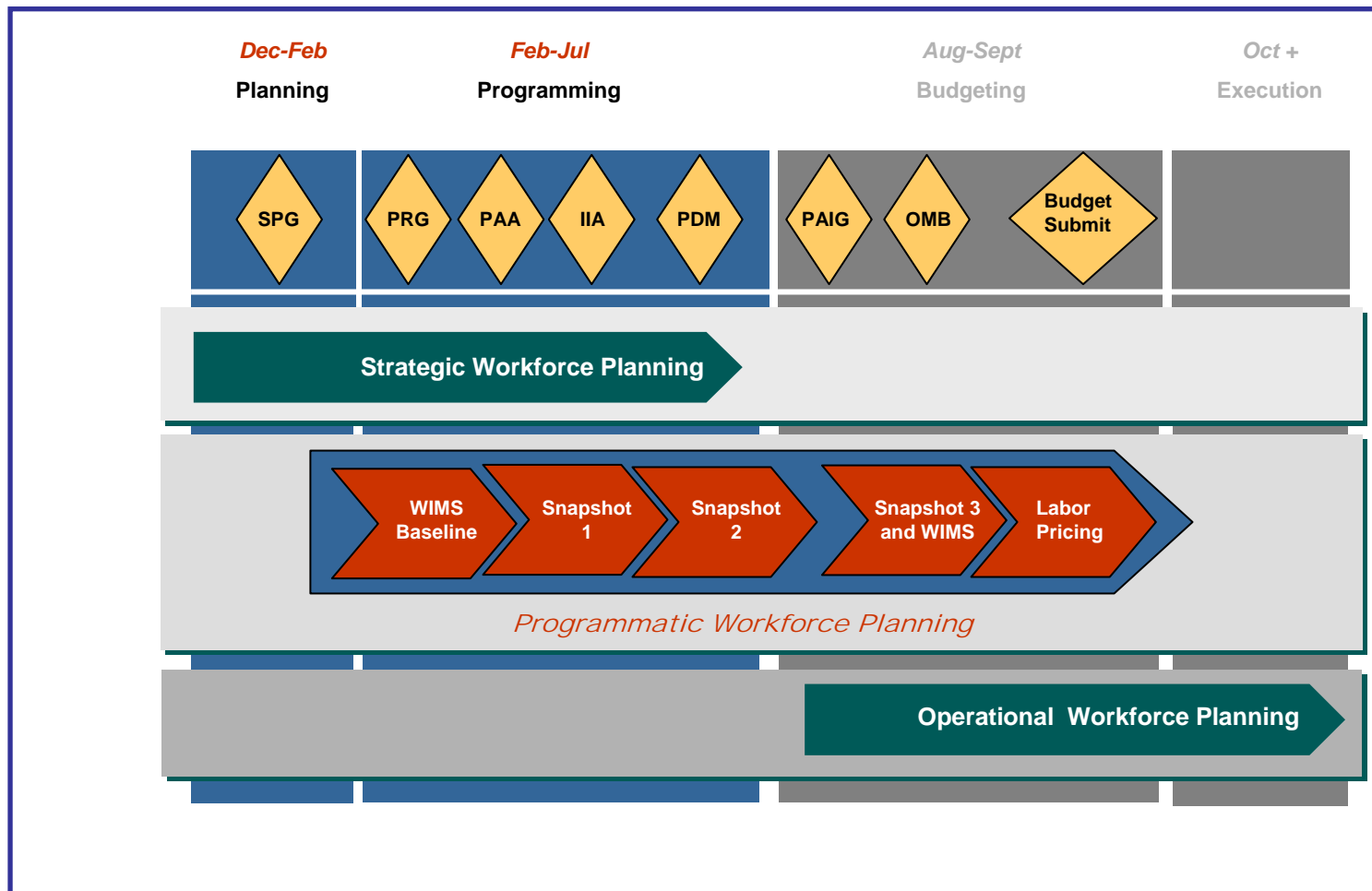


# Workforce Planning Cycle and PPBE



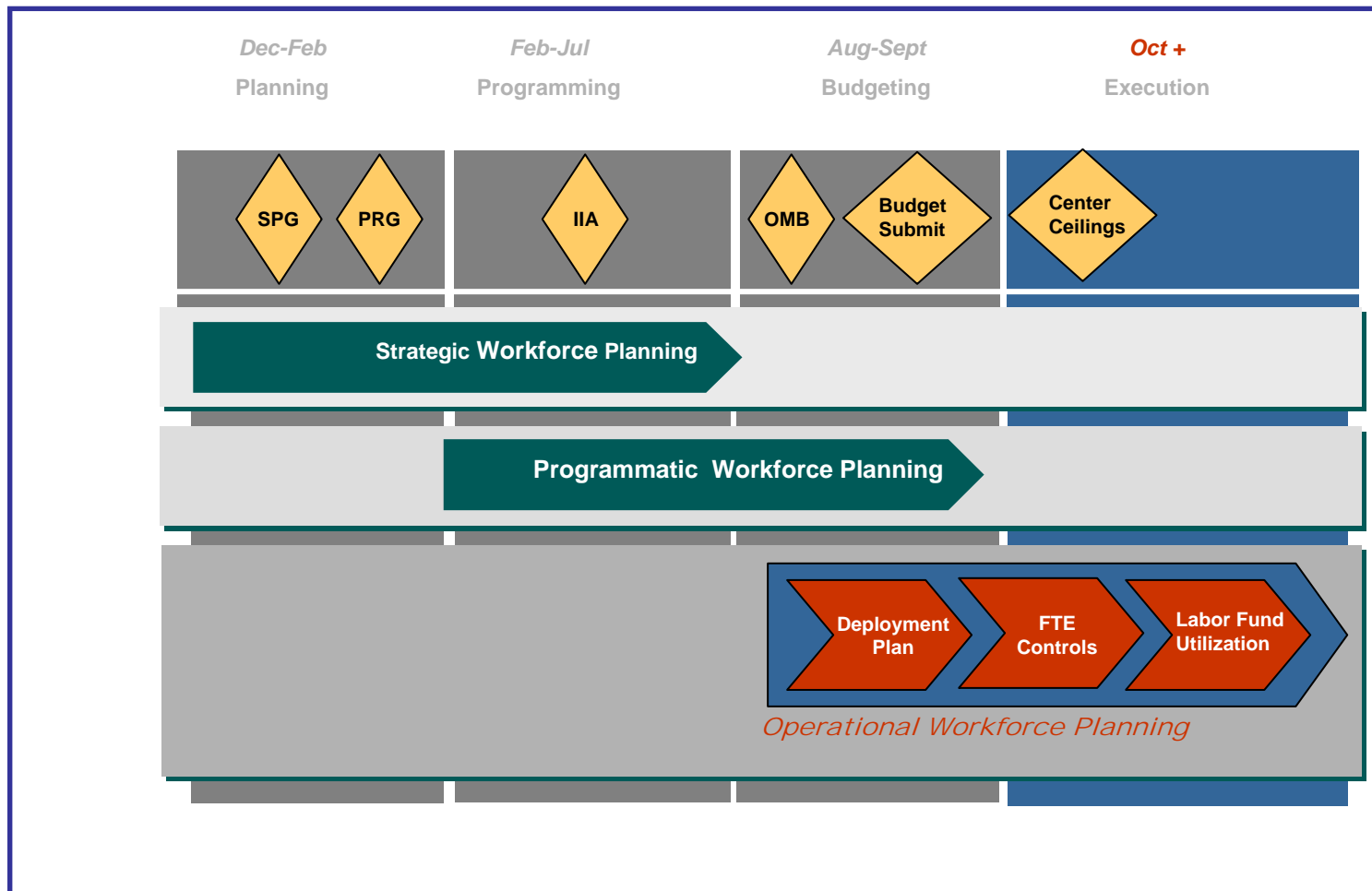


# Workforce Planning Cycle and PPBE



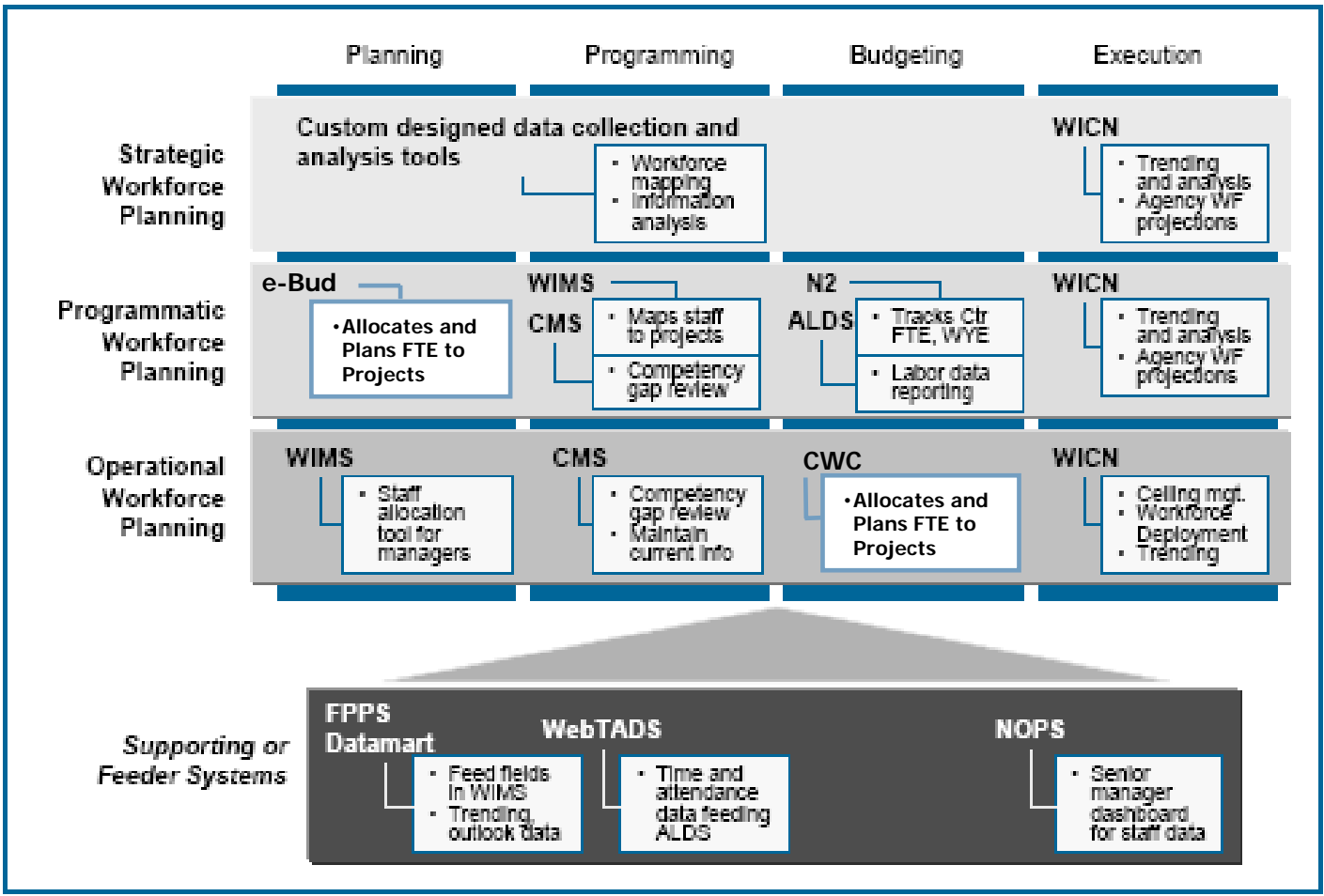


# Workforce Planning Cycle and PPBE





# Agency and Center Workforce Planning Systems and Data Resources





# Why Your Role As Supervisor is Critical

---

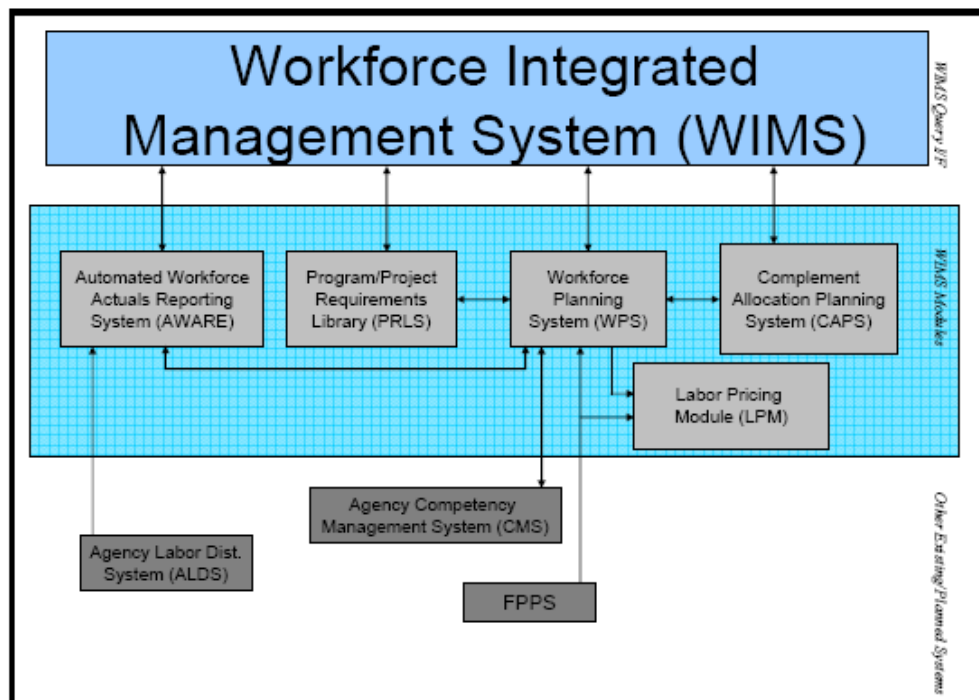
- NASA's Agency-level workforce planning process provides insight into what changes to the workforce are necessary to meet mission goals.
- Process yields reports, data, and context (i.e., rationale and explanation) that summarize the condition of the workforce, identify key risks, and drive human capital programs or adjustments to work distribution.
- NASA uses the workforce planning information in Workforce Integrated Management System (WIMS) and Competency Management System (CMS) to:
  - Summarize business assumptions (e.g., work and funding levels)
  - Outline management actions to mitigate risk of long-term misalignments and shape supply over time, mitigate or avoid near-term misalignments, and ensure an adequate supply of the necessary capabilities.
  - Present summary of current or anticipated misalignments that cannot be solved within the Center or solutions that require Agency approval, assistance, or attention.
  - Provide Agency with reports of summary of areas of risk that impact distribution of funding/work for MDs/Programs across multiple Centers
  - Influence how and for what work contractors are used and the general nature of the procurements needed to perform the work and maintain adequate Agency flexibility.



# Backup



# Workforce Systems



- Provides a single, centralized repository for Center and Agency workforce and competency planning data for use in Agency workforce planning decisions and analysis.
- Employee and organization information on NASA employees obtained via interface with Federal Personnel and Payroll System (FPPS)
- Employee competency information obtained via an interface with Competency Management System (CMS)
- Actual labor information obtained via an interface between with Agency Labor Distribution System (ALDS)



# Workforce Systems

---

## **Competency Management System (CMS)**

- CMS maintains both the competencies required for each position (regardless of the incumbent) and the employee competency portfolios. CMS helps identify gaps between current competencies and those required in the future supporting Center planning for employee development, hiring, and resource reallocation measures to reduce gaps. Using CMS, managers can identify positions and their associated competencies, search for competencies to support their projects, and track the current competency levels of their workforce.

## **Federal Personnel and Payroll System (FPPS) Datamart**

- An online personnel and payroll system for processing personnel actions and maintaining related information on all NASA employees. System is provided by the Department of the Interior as the service provider and is used by a number of federal agencies. The personnel actions processed through FPPS feed personnel data fields in WIMS for status snapshots as of the end of every pay period. FPPS and WIMS data is fed to the Workforce Information Cubes for NASA (WICN) cubes producing summarized output supporting workforce analysis. The FPPS Datamart also provides current and historical information on the workforce to assess historical trends for use as a basis for forecasting retirement eligibility, employee accession and attrition, supervisory ratios, and “fresh-out” hiring.

## **NASA Organizational Profile System (NOPS)**

- Provides managers with information about NASA employees, as well as with the ability to compare NASA organizations. NOPS, a web-based tool, provides access to more than 100 data fields concerning the current and past workforce, and produces concise and current reports that are updated weekly. A single report provides such information as the diversity mix of an organization, employee retirement eligibility, total organizational salary costs, and organizational expenditure on awards.



# Workforce Information Cubes for NASA (WICN)

## Workforce Information Cubes for NASA (WICN)

- NASA tracks civil service personnel closely and provides updated information to Agency management every two weeks through a set of multidimensional data Cubes called the Workforce Information Cubes for NASA (WICN).
- Cubes contain information on workforce strength, competencies, history, demographics, and labor charges extracted from various operational systems.
- Provide fundamental workforce data and data drill-down capabilities vital to Strategic, Programmatic, and Operational Workforce Planning.
- Data used to conduct forecasts and trend analyses, evaluate workforce changes over time, and extract data points of interest for other reports.

### — Links —

For more information about WF Cubes or how to use the system, click on the following links:

- ▶ <http://wicn.nssc.nasa.gov/> to access WICN
- ▶ <http://nasapeople.nasa.gov/Workforce/data/WICNCurrent.htm> for selected views of the current workforce profile